

2. Real party of interest.

Gary Josephson is the real party interest.

3. Related appeals and interferences.

There are no prior or pending appeals, interferences, or judicial proceedings known to Josephson, Josephone's legal representative, or assignee which may be related to, directly affected or be directly affected by or having a bearing on the Examiner's decision in the pending application.

4. Status of claims.

Claims 1-9 and 11 are rejected and claim 10 is canceled.

5. Status of amendments.

No amendments have been filed subsequent to final rejection.

6. Summary of claimed subject matter.

A. Claim 1, the first independent claim on file.

A surgical round knife (10) suitable for being connected to a suction source (12)

[Page 9, lines 5-6], comprising:

- a) a shaft (14) [Page 9, line 7] being hollow [Page 9, line 14], provided with a longitudinal canal therethrough, and having a blade end (22) [Page 9, lines 14-15];
- b) a blade (16) being round [Page 9, line 7], having a diameter, and mounted at said blade end (22) of said shaft (14) [Page 9, line 8];
- c) a suction interface (18) [Page 9, lines 7-8] positioned remotely from said blade end (22) [Page 9, lines 8-9] and operatively connected for withdrawing blood (**not shown**) from said longitudinal canal in said shaft (14) and out said suction interface (18) [Page 13, lines 2-3];

wherein said suction interface (18) is for freeing up a hand (**not shown**) of a surgeon (**not shown**) from having to hold a separate suction device (**not shown**) [Page 9, lines 10-12];

wherein said blade end (22) of said shaft (14) extends into said round blade (16) approximately one third to one half said diameter of said round blade (16) [Page 10, lines 7-8].

B. Claim 2, the first dependent claim on file.

The knife (10) as defined in claim 1, wherein said shaft (14) is slender and elongated [Page 9, line 14].

C. Claim 3, the second dependent claim on file.

The knife (10) as defined in claim 1, wherein said shaft (14) has a proximal end (20) [Page 9, line 14];

wherein said shaft (14) has a distal end (22) [Page 9, lines 14-15];

wherein said suction interface (18) is disposed in a vicinity of said proximal end (20) of said shaft (14) [Page 9, line 16]; and

wherein said blade (16) is disposed in a vicinity of said distal end (22) of said shaft (14) [Page 9, lines 16-17].

D. Claim 4, the third dependent claim on file.

The knife (10) as defined in claim 1, wherein said suction interface (18) is for being sealingly engaged in a plastic suction tube (26) that fluidly communicates with the suction source (12) so as to allow the suction (**not shown**) to extend through said shaft (14) [Page 9, line 19 to page 10, line 2].

E. Claim 5, the fourth dependent claim.

The knife (10) as defined in claim 1; further comprising a plastic suction tube (26) [Page 10, line 1]; and

wherein said suction interface (18) is sealingly engaged in said plastic suction tube (26) that is for fluidly communicating with the suction source (12) so as to allow the suction (**not shown**) to extend through said shaft (14) [Page 9, line 19 to page 10, line 2].

F. Claim 6, the fifth dependent claim on file.

The knife (10) as defined in claim 1, wherein said shaft (14) has a proximal end (20) [*Page 9, line 14*];

wherein said suction interface (18) comprises a bulbous ferrule (24) [*Page 9, line 18*];

wherein said bulbous ferrule (24) of said suction interface (18) is disposed around said proximal end (20) of said shaft (14) [*Page 9, lines 18-19*]; and

wherein said bulbous ferrule (24) of said suction interface (18) is for being sealingly engaged in a plastic suction tube (26) that fluidly communicates with the suction source (12) so as to allow the suction (**not shown**) to extend through said shaft (14) [*Page 9, line 18 to page 10, line 2*].

G. Claim 7, the sixth dependent claim on file.

The knife (10) as defined in claim 6, wherein said bulbous ferrule (24) of said suction interface (18) is separate from said proximal end (20) of said shaft (14) [*Page 10, lines 3-4*]; and

wherein said bulbous ferrule (24) and said proximal end (20) of said shaft (14) form an integral structure [*Page 10, lines 4-5*].

H. Claim 8, the seventh dependent claim on file.

The knife (10) as defined in claim 6, wherein said bulbous ferrule (24) of said suction interface (18) is one-piece with said proximal end (20) of said shaft (14) [Page 10, lines 3-4]; and

wherein said bulbous ferrule (24) and said proximal end (20) of said shaft (14) form an integral structure [Page 10, lines 4-5].

I. Claim 9, the eighth dependent claim on file.

The knife (10) as defined in claim 1, wherein said blade end of said shaft (14) extends into said blade (16) so as to allow the suction (**not shown**) to extend through said shaft (14) to said blade (16).

J. Claim 11, the second independent claim on file.

A surgical knife (10) for being removably connectable to a suction source (12) [Page 9, lines 5-6], said knife (10) comprising:

- a) a slender elongated shaft (14) [Page 9, line 14] provided with a longitudinal canal therethrough, said shaft (14) having a proximal end (20) [Page 9, line 14] and a distal end (22) [Page 9, lines 14-15], said shaft (14) defining an effluent opening remote from said distal end (22) of said shaft (14) for exit of fluid (**not shown**) via said canal in said shaft (14) to the suction source (12), said shaft (14) further defining an influent opening for receiving blood (**not shown**) to said canal in said shaft (14);

b) an annular blade (16) [Page 9, line 7] mounted at said distal end (22) of said shaft (14) [Page 9, line 8], said influent opening positioned at said distal end (22) of said shaft (14), said distal end (22) of said shaft (14) extending into said annular blade (16) approximately one third to one half said blade (16) [Page 10, lines 7-8];

whereby the blood (**not shown**) is removed from said blade (16) via said influent opening of said shaft (14) and said canal in said shaft (14) to maintain visualization of a cutting portion of said blade (16).

K. Claim 12, the third independent claim on file.

A surgical annular knife (10) for being removably connectable to a suction source (12) [Page 9, lines 5-6], said knife (10) being suitable typically for enabling an ear surgeon (**not shown**) to make an incision (**not shown**) in an ear canal (**not shown**) so as to dissect and lift ear canal skin (**not shown**) off a bony canal wall (**not shown**) down to a tympanic membrane (**not shown**) for allowing access to an inner ear space (**not shown**) while evacuating blood (**not shown**) to maintain visualization in a tight otologic surgical site (**not shown**) using only said knife (10) in one hand (**not shown**) of the surgeon (**not shown**), said knife (10) comprising:

a) a slender, hollow, elongated shaft (14) [Page 9, line 14] defining a longitudinal canal therethrough, said shaft (14) having a proximal end (20) [Page 9, line 14] suitable for being held by a hand (**not shown**) of a surgeon

(**not shown**) and a distal end (22) [*Page 9, lines 14-15*], an effluent opening remote from said distal end (22) of said shaft (14) for exit of fluid (**not shown**) via said canal in said shaft (14) to the suction source (12), said shaft (14) further defining at said distal end (22) thereof an influent opening for receiving blood (**not shown**) to said canal in said shaft (14);

- b) an annular blade (16) [*Page 9, line 7*] having a diameter and also mounted at said distal end (22) of said shaft (14) [*Page 9, line 8*] with said distal end (22) of said shaft (14) and said influent opening in said shaft (14) extending into said annular blade (16) approximately one third to one half said diameter of said blade (16) [*Page 10, lines 7-8*];

whereby blood (**not shown**) is withdrawn from said blade (16) into said influent opening in said shaft (14) for evacuation to the suction source (12) via said canal in said shaft (14) so as to allow visualization of a cutting area of said blade (16) to be maintained and blood (**not shown**) to be withdrawn from a tight surgical site (**not shown**) [*Page 13, lines 2-3*];

and whereby the surgeon (**not shown**) is able to operate said surgical knife (10) with one hand (**not shown**) so as to allow the other hand (**not shown**) to be free for other use [*Page 9, lines 10-12*].

7. Grounds of rejection to be reviewed.

Claims 1-9, 11, and 12 are rejected under 35 U.S.C. § 103 as being patentable over Chen *et al.*

8. Argument.

A. The rejection of claims 1-9, 11, and 12 under 35 U.S.C. § 103 as being patentable over Chen *et al.*

(1) Independent claims 1, 11, and 12.

(a) 37 CFR § 1.111(c).

As required by 37 CFR § 1.111(c), each of independent claims 1, 11 and 12 generally describe the following advantageous distinctive feature distinguishing over and avoiding the prior art:

“said blade end of said shaft extends into said round blade approximately one third to one half said diameter of said round blade.”
[Emphasis added]

(b) The advantages.

When the suction round knife of independent claims 1, 11, and 12 is designed in accordance with this advantageous distinctive feature, incision, elevation of the canal skin, and suctioning of blood is performed ***at the precise location within the surgical site using only a single instrument and a single hand***, thereby allowing the surgeon to use the other hand for additional instrumentation and work. For example, the tissue of the bony canal

wall is *elevated off while the suction tip is precisely positioned close to the elevator to evacuate blood and maintain visualization*. Once the skin is *elevated* off the posterior canal wall down to the ear drum edge, the surgeon delicately *elevates* the eardrum edge out of its sulcus. After the flap is *elevated*, healthy and diseased tissue is *teased off* of otologic structures, such as the ear bones, floor of the middle ear, mastoid bone, semicircular canals, cochlea, facial nerve, and other structures.

Previously, during these type of surgical procedures, the surgeon had to use a separate suction, a separate elevator, and a separate knife, by rotating these instruments between two hands. The embodiments of the present invention allow the surgeon to have all three needed instruments, *i.e.*, a cutting edge, a round surface for an elevator, and a suction, in a single instrument and in a single hand, *with each instrument portion precisely positioned relative to each other and to the operation site*. This allows the surgeon's free hand to use other instrumentation to improve the surgeon's ability to perform operations.

Surgeries benefitting from the embodiments of the present invention include, but are not limited to, tympanoplasty — repair of eardrum, ossiculoplasty — repair of ear bones, mastoidectomy — remove disease tumor or infection from mastoid, cochlear implantation — implant device to provide hearing in deaf patients, congenital ear surgery — create an ear canal, inner ear surgeries for dizziness, facial nerve disorders, and other similar procedures.

As in any surgery, one limitation the surgeon experiences is the use of only his or her two hands. In some types of surgery, the surgeon has the fortune of an assistant to help during his or her work allowing additional hands to hold instrumentation. In microscopic otologic surgery, however, the surgeon does not have the ability to have an assistant because of the small working area. Therefore, the otologist must rely on instrumentation available and only his or her own two hands.

Previously, in the practice of ear surgery, during most procedures the surgeon finds him or herself using one hand to hold a suction to evacuate blood while the other hand cuts, elevates flaps, and removes or repairs disease, tissue, or bone.

The hand of the surgeon previously holding the otologic suction is now freed by the embodiments of the present invention to hold an additional instrument while working under the microscope in the ear canal. The surgeon now has three instruments in a single instrument and a single hand, namely, a cutting edge, a round surface for elevation, and a suction all in one, and *all precisely positioned relative to each other and to the operation site* thereby allowing the surgeon's free hand to use other instrumentation to improve the surgeon's ability to perform operations.

- (c) *The advantageous distinctive feature of each of independent claims 1, 11, and 12 is not merely a matter of design choice.*

So it has been shown that “said blade end of said shaft extending into said round blade approximately one third to one half said diameter of said round blade”[Emphasis added] is

significant, and as such, the courts hold that it is not just a matter of design choice but must be considered in determining patentability.¹

(d) *Each of independent claims 1, 11, and 12 distinguish over and avoid Chan et al.*

Chan *et al.* do not teach “said blade end of said shaft extends into said round blade approximately one third to one half said diameter of said round blade.”[Emphasis added] as generally required by the advantageous distinctive feature of each of independent claims 1, 11, and 12 discussed above, but rather Chan *et al.* teach that the aperture 88 [relied upon as the distal end of the shaft of amended claim 1] is positioned *less than one third* into the blade 26, as shown in **FIGURES 5 and 6** of Chan *et al.* [relied upon by the Examiner], and rightfully so, because the aperture 88 is for delivering surgical fluid to the blade and not for providing suction as required by independent claims 1, 11, and 12, as discussed at numerous occurrences throughout Chan *et al.*, for example: “* * * an aperture for delivering said fluid * * *”[Emphasis added].²

Chan *et al.* deliver surgical fluid to the blade to lubricate the tip to minimize irritation of stromal tissue, as discussed at numerous occurrences throughout Chan *et al.*,

¹ For example, *In re Dailey and Eilers*, 149 USPQ 47 (CCPA 1976) (“Appellants have presented no argument which convinces us that the particular configuration of their container is significant or is anything more than one of numerous configurations a person of ordinary skill in the art would find obvious for the purpose of providing mating surfaces in the collapsed container of Matzen. See *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459.”[Emphasis added]).

² Col. 7, lines 30-31 and 56-57, and col. 8, lines 18-19 and 44-45 of Chan *et al.*

for example: “said activating step lubricates said dissecting tip so as to minimize irritation of stromal tissue.”[Emphasis added]³

Chan *et al.* specifically teach that the number and position of the aperture(s) are *arbitrary*. “As a further example, dissecting tip **14a** may be formed with only one aperture for the delivery of a surgical fluid, or more than two apertures for the delivery of a surgical fluid.”[Emphasis added]⁴ and “* * * apertures **88** and **90** may be located on portions of the blade **26** other than depressions **32** and **34**, if desired.”[Emphasis added]⁵

With this arrangement of Chan *et al.*, the so-called suction portion [the apertures **88** and/or **90**] is *not precisely positioned relative to the other portions and to the operation site* to allow, for example, the tissue of the bony canal wall to be elevated off while the suction tip is *precisely positioned* close to the elevator to evacuate blood and maintain visualization by use of only one hand of the surgeon.

The Examiner states in the final rejection⁶ that “[i]f the prior art structure is capable of performing the intended use, then it meets the claim.” It is obvious, though, that the prior art structure of Chan *et al.* is not capable of performing the intended use of the structure of independent claims 1, 11, and 12. Chan *et al.* utilize a port **92** for use in

³ Col. 8, lines 8-9 and 54-56 of Chan *et al.*

⁴ Col. 7, lines 5-8 of Chan *et al.*

⁵ Col. 6, lines 22-23 of Chan *et al.*

⁶ At Page 3, ¶ 3, sub¶ 1, lines 5-6 of the last Office action.

supplying a fluid from a reservoir 94,⁷ while independent claims 1, 11, and 12 utilize a suction interface 18 for use in creating a suction.⁸ The structure of a port 92 of Chan *et al.* is not capable of providing the intended use of the suction interface 18 of independent claims 1, 11, and 12. Thus, contrary to the Examiner's statement above, the port 92 of Chan *et al.* is **not** capable of performing the intended use of the suction interface 18 of independent claims 1, 11, and 12, and therefore does not meet independent claims 1, 11, and 12.

(2) Dependent claims 6, 7, and 8.

(a) 37 CFR § 1.111(c).

As required by 37 CFR § 1.111(c), dependent claims 6, 7, and 8 describe the following advantageous distinctive features, respectively, distinguishing over and avoiding the prior art:

“said bulbous ferrule of said suction interface is disposed around said proximal end of said shaft.”[dependent claim 6][Emphasis added]

“said bulbous ferrule of said suction interface is separate from said proximal end of said shaft”[dependent claim 7][Emphasis added]

“said bulbous ferrule of said suction interface is one-piece with said proximal end of said shaft”[dependent claim 8][Emphasis added]

⁷ Col. 6, lines 30-31 of Chan *et al.* (“Port 92 is for fluidly coupling with a reservoir 94.”)

⁸ Page 9, lines 8-10 of the application (“The suction interface 18 is * * * for fluidly communicating with the suction source 12 so as to provide a suction at the round blade 16 * * *.”)

Chan *et al.* are silent as to how the tubing **95** is coupled to the port **92** [relied upon as the suction interface of claims 6, 7, and 8] other than “[p]ort **92** is for fluidly coupling with a reservoir **94**. Such coupling is preferably performed using medical grade silastic tubing **95**.”⁹ Absent such a disclosure, one cannot say that Chan *et al.* teach the advantageous distinctive features of dependent claims 6, 7, and 8.

(3) Secondary considerations.

(a) Introduction.

The Supreme court indicates that “secondary considerations as commercial success, long felt but unsolved needs, failures of others” and other similar matters when present must be employed to illuminate the circumstances surrounding the origin of the invention sought to be patented, and may have relevancy as indicia of the obviousness or nonobviousness of that invention.¹⁰ Decisions by other courts have built upon this view and given rise to a number of “secondary considerations” that should be considered in evaluating the nonobviousness of a claimed invention, including:

- Commercial success
- Long-felt need
- Failure of others
- Skepticism by experts
- Praise by others
- Definitiveness

⁹ Col. 6, lines 31-33 of Chan *et al.*

¹⁰ *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966).

“Recognizing that inference of obviousness drawn from prior art disclosures is only *prima facie* justification for drawing ultimate legal conclusion that claimed invention is unpatentable under 35 U.S.C. § 103, it is imperative that such secondary considerations as commercial success and adaption by competitor also be evaluated in determining final validity of that legal conclusion * * *.”¹¹

To be pertinent to that of nonobviousness, the secondary considerations must relate to the functions and advantages disclosed or inherent in the invention being claimed in the patent application. There must be a nexus between the claimed invention and its secondary considerations. The nexus requirement compels a showing of the relationship between the secondary considerations and the claimed invention. “A claim held obvious when viewed in light of the prior art is nonobvious if there is strong commercial success of the commercial product, if said product is an embodiment of the claimed invention ipso facto there must be a nexus between commercial success and the claimed invention; such commercial success must result from the claimed invention and must be due to the merits of the claimed invention beyond what is readily available in the prior art.”¹²

¹¹ *In re McLaughlin*, 170 USPQ 209, 210 (CCPA 1971).

¹² *J.T. Eaton & Company, Inc. v. Atlantic Paste & Glue Company*, 106 F.3d 1563, 41 USPQ.2d 1641 (Fed. Cir. 1997). See *In re Vamco Machine & Tool, Inc.*, 752 F.2d 1564, 224 USPQ 716 (CAFC 1985); *Cable Electric Products, Inc v. Genmark, Inc*, 770 F.2d 1015, 226 USPQ 881 (CAFC 1985).

“Secondary” considerations are by no means secondary in importance.¹³ Rather, they are only “secondary” in sequence. Objective evidence of secondary considerations is often the most persuasive of factors because it forestalls hindsight analysis.¹⁴

(b) *Commercial success.*

The claimed invention by its own merit has stimulated demand and commenced domination of the market segment, has displaced prior devices, instilled a willingness of customers to pay a premium for it, and has increased in market share following its introduction, and therefore must be considered when evaluating nonobviousness.¹⁵ The claimed invention is being successfully sold by a world renowned surgical implement supplier, “Medtronic,” as demonstrated by the attached flier.

It is assumed that if a solution to a given problem carried with it the reward of market success, then if the claimed invention were obvious others would have brought it forward previously in order to reap the market reward. Thus, since commercial success was achieved by the claimed invention, it can be inferred that others attempted but failed to solve the problem the claimed invention has. Put differently, commercial success of the claimed invention is an indication that the claimed invention involves the application of uncommon ingenuity rather than merely the exercise of ordinary skill.

¹³ *Truswal Systems Corp. v. Hydro-Air Engineering, Inc.*, 813 F.2d 1207, 2 USPQ 881 (CAFC 1987).

¹⁴ *Cable Electric Products* at footnote 9.

¹⁵ *J.T. Eaton & Company, Inc. v. Atlantic Paste & Glue Company* at footnote 12.

(c) ***Long-felt need.***¹⁶

The claimed invention established the existence of a long-felt need by proving some sort of defect or lack in the existing technology. The so-called suction portion of Chan *et al.* — the so-called closest prior art — is ***not precisely positioned relative to the other portions and to the operation site*** to allow, for example, the tissue of the bony canal wall to be elevated off while the suction tip is ***precisely positioned*** close to the elevator to evacuate blood and maintain visualization by use of only one hand of the surgeon.

Since the claimed invention satisfies a need that was long-felt in the relevant industry, it can be inferred that the claimed invention was nonobvious; if it had been obvious, the solution to the long-felt need would have been achieved much earlier. Put differently, since necessity is the mother of invention, a continuing need for the claimed invention is among the best evidence of the nonobviousness of the claimed invention.

(d) ***Failure of others.***¹⁷

The inability of others to achieve the satisfactory solution to a long-felt need or to realize the extent of commercial success enjoyed by the claimed invention is another related approach to proving nonobviousness of the claimed invention. The failure of others to solve the problem resolved by the claimed invention illustrates the nonobviousness of the

¹⁶ See *Railroad dynamics, Inc. v. A Stucki Co.*, 579 F. Supp. 353, 218 USPQ 618 (E.D. Pa. 1983), *aff'd*, 727 F.2d 1506, 220 USPQ 929 (CAFC), *cert. denied*, 469 U.S. 871 (1984); *In re Tiffin*, 443 F.2d 394, 170 USPQ 88 (CCPA 1971).

¹⁷ See *Jones v. Hardy* 727 F.2d 1524, 220 USPQ 1021 (CAFC 1984); *Dow Chemical Co. v. Halliburton Co.*, 227 USPQ 897 (N.D. Miss 1985).

claimed invention to those skilled in the art as they sought to achieve the solution represented by the claimed invention. The lack of success by others clearly highlights the nonobviousness of the claimed invention.

(e) *Experts' skepticism.*

Since the claimed invention arose from an effort to solve the problem in a manner contrary to the teaching of the prior art or to the accepted wisdom of experts in the field, and in an atmosphere of skepticism and disbelief, it is highly persuasive of its nonobviousness.¹⁸

Josephson achieved the claimed invention by doing what those skilled in the art suggested should not be done; this fact is strongly probative of nonobviousness.¹⁹

(f) *Acclaim.*²⁰

Praise of the claimed invention by competitors is another important secondary consideration of nonobviousness. Like long-felt need, evidence of an industry's positive reaction to the invention, and its immediate acceptance, can be quite persuasive, such as the license from "Medtronic."²¹

¹⁸ See *United States v. Adams*, 383 U.S. 39 51-52 (1966); *In re Hedges*, 228 USPQ 685 (CAFC 1986); *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d. 1540, 220 USPQ 303 (CAFC 1983), *cert. denied*, 469 U.S. 851(1984).

¹⁹ See *Kloster Speedsteel AB v. Crucible Inc.*, 793 F.2d 1565, 230 USPQ 81 (CAFC), *modified in part on rehearing*, 231 USPQ 160 (CAFC 1986), *cert. denied*, 479 U.S. 1034 (1987).

²⁰ See *Interconnect Planning Corp. v. Feil*, 774 F.2d 1132, 227 USPQ 543 (CAFC 1985); *Burlington Industries, Inc. v. Quigg* 822 F.2d 1581, 3 USPQ 2d 1436 (CAFC 1987); *Gillette Co. v. S. C Johnson & Son, Inc.*, 919 F.2d 720, 16 USPQ2d 1920.(CAFC 1990).

²¹ See discussion of Commercial Success at ¶ (b).

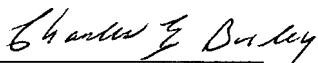
(g) Definitiveness.²²

The prior art is so definitive that there is no motivation to make what might otherwise appear to be obvious changes.

(4) Summation.

In view of the arguments presented, Josephson respectfully submits that the Examiner's grounds for the rejection of claims 1-9, 11, and 12 under 35 U.S.C. § 103 as being patentable over Chen *et al.* are no longer applicable and therefore Josephson respectfully requests that the Examiner withdraw this rejection.

Respectfully,

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²² See *In re Albrecht*, 514 F.2d 1389, 1396, 185 USPQ 585, 590 (CCPA 1975); *In re Stemink*, 444 F.2d 581, 170 USPQ 343 (CCPA 1971); *In re Ruschig*, 343 F.2d 965, 145 USPQ 274 (CCPA 1965).

9. Claims appendix.

- 1 1. A surgical round knife suitable for being connected to a suction source, comprising:
 - 2 a) a shaft being hollow, provided with a longitudinal canal therethrough, and
3 having a blade end;
 - 4 b) a blade being round, having a diameter, and mounted at said blade end of
5 said shaft;
 - 6 c) a suction interface positioned remotely from said blade end and operatively
7 connected for withdrawing blood from said longitudinal canal in said shaft
8 and out said suction interface;
9 wherein said suction interface is for freeing up a hand of a surgeon from
10 having to hold a separate suction device;
- 11 wherein said blade end of said shaft extends into said round blade approximately
12 one third to one half said diameter of said round blade.
- 1 2. The knife as defined in claim 1, wherein said shaft is slender and elongated.
- 1 3. The knife as defined in claim 1, wherein said shaft has a proximal end;
2 wherein said shaft has a distal end;
3 wherein said suction interface is disposed in a vicinity of said proximal end of said
4 shaft; and
5 wherein said blade is disposed in a vicinity of said distal end of said shaft.

1 4. The knife as defined in claim 1, wherein said suction interface is for being sealingly
2 engaged in a plastic suction tube that fluidly communicates with the suction source
3 so as to allow the suction to extend through said shaft.

1 5. The knife as defined in claim 1; further comprising a plastic suction tube; and
2 wherein said suction interface is sealingly engaged in said plastic suction tube that
3 is for fluidly communicating with the suction source so as to allow the suction to
4 extend through said shaft.

1 6. The knife as defined in claim 1, wherein said shaft has a proximal end;
2 wherein said suction interface comprises a bulbous ferrule;
3 wherein said bulbous ferrule of said suction interface is disposed around said
4 proximal end of said shaft; and
5 wherein said bulbous ferrule of said suction interface is for being sealingly engaged
6 in a plastic suction tube that fluidly communicates with the suction source so as to
7 allow the suction to extend through said shaft.

1 7. The knife as defined in claim 6, wherein said bulbous ferrule of said suction
2 interface is separate from said proximal end of said shaft; and
3 wherein said bulbous ferrule and said proximal end of said shaft form an integral
4 structure.

- 1 8. The knife as defined in claim 6, wherein said bulbous ferrule of said suction
2 interface is one-piece with said proximal end of said shaft; and
3 wherein said bulbous ferrule and said proximal end of said shaft form an integral
4 structure.
- 1 9. The knife as defined in claim 1, wherein said blade end of said shaft extends into
2 said blade so as to allow the suction to extend through said shaft to said blade.
- 1 11. A surgical knife for being removably connectable to a suction source, said knife
2 comprising:
- 3 a) a slender elongated shaft provided with a longitudinal canal therethrough,
4 said shaft having a proximal end and a distal end, said shaft defining an
5 effluent opening remote from said distal end of said shaft for exit of fluid
6 via said canal in said shaft to the suction source, said shaft further defining
7 an influent opening for receiving blood to said canal in said shaft;
- 8 b) an annular blade mounted at said distal end of said shaft, said influent
9 opening positioned at said distal end of said shaft, said distal end of said
10 shaft extending into said annular blade approximately one third to one half
11 said blade;

12 whereby the blood is removed from said blade via said influent opening of said
13 shaft and said canal in said shaft to maintain visualization of a cutting portion of
14 said blade.

- 1 12. A surgical annular knife for being removably connectable to a suction source, said
2 knife being suitable typically for enabling an ear surgeon to make an incision in an
3 ear canal so as to dissect and lift ear canal skin off a bony canal wall down to a
4 tympanic membrane for allowing access to an inner ear space while evacuating
5 blood to maintain visualization in a tight otologic surgical site using only said knife
6 in one hand of the surgeon, said knife comprising:
- 7 a) a slender, hollow, elongated shaft defining a longitudinal canal
8 therethrough, said shaft having a proximal end suitable for being held by a
9 hand of a surgeon and a distal end, an effluent opening remote from said
10 distal end of said shaft for exit of fluid via said canal in said shaft to the
11 suction source, said shaft further defining at said distal end thereof an
12 influent opening for receiving blood to said canal in said shaft;
- 13 b) an annular blade having a diameter and also mounted at said distal end of
14 said shaft with said distal end of said shaft and said influent opening in said
15 shaft extending into said annular blade approximately one third to one half
16 said diameter of said blade;

17 whereby blood is withdrawn from said blade into said influent opening in said shaft
18 for evacuation to the suction source via said canal in said shaft so as to allow
19 visualization of a cutting area of said blade to be maintained and blood to be
20 withdrawn from a tight surgical site;
21 and whereby the surgeon is able to operate said surgical knife with one hand so as
22 to allow the other hand to be free for other use.

10. Evidence appendix.

The patent to Chan *et al.* was first entered into the record by the Examiner in the Office action mailed from the Patent Office on January 8, 2007 to reject claims 1-10, of which claims 1-9, 11, and 12 are to be currently reviewed.

11. Related proceedings appendix.

Being that there are no prior or pending appeals, interferences, or judicial proceedings known to applicant, the applicant's legal representative, or assignee which may be related to, directly affected or be directly affected by or having a bearing on the Examiner's decision in the pending application, there are no decisions rendered by a court or the Board.